	Application No.	Applicant(s)
Notice of Allowability	10/667,942	POLK ET AL.
	Examiner	Art Unit	
	Esaw T. Abraham	2133	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to *Amdt filed on 04/24/06*.

2. ☒ The allowed claim(s) is/are *1-20*.

3. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a) ☐ All   b) ☐ Some*   c) ☐ None of the:

       1. ☐ Certified copies of the priority documents have been received.

       2. ☐ Certified copies of the priority documents have been received in Application No. _____ .

       3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

    * Certified copies not received: _____ .

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application. **THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.**

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.

5. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.

    (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached

       1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____ .

    (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____ .

    Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).

6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

1. ☐ Notice of References Cited (PTO-892)

2. ☐ Notice of Draftperson's Patent Drawing Review (PTO-948)

3. ☐ Information Disclosure Statements (PTO-1449 or PTO/SB/08), Paper No./Mail Date _____

4. ☐ Examiner's Comment Regarding Requirement for Deposit of Biological Material

5. ☐ Notice of Informal Patent Application (PTO-152)

6. ☐ Interview Summary (PTO-413), Paper No./Mail Date _____ .

7. ☐ Examiner's Amendment/Comment

8. ☒ Examiner's Statement of Reasons for Allowance

9. ☐ Other _____ .

GUY LAMARRE
PRIMARY EXAMINER

DETAILED ACTION

Examiner's statement for reason for allowance

1.   Claims **1-20** have been allowed.

The following is an examiner's statement for allowance:

As per claim 1:

The prior art, Gibson et al. (U.S. PN: 6,922,806) teach or disclose a system for

fast forward error correction coding includes a transmitting device having a data source

and a forward error correction (FEC) encoder (FEC module) wherein the FEC encoder

is coupled to the data source and is adapted to encode packetized data from the data

source and a channelizer is coupled to the FEC encoder and is adapted to interleave

the FEC encoded packetized data among a plurality of communication channels. The

prior art, Matsumoto (U.S. PN: 6,522,731) teaches that a transmitter configured to

transmit scramble and forward error correction (FEC) (85, 86) and an interleaver (87)

and further this configuration corresponds to the configuration on the receiver side (see

col. 9, lines 43-52). However, the prior art taken singly or in combination fail to teach,

anticipate, suggest, or render obvious a forward error correction communication system,

comprising: a forward error correction (FEC) module configured to define a plurality of

FEC code words each of the FEC code words having a plurality characters and each of

the characters having a plurality of bits; and a transmission module configured to

interleave the FEC code words across multiple communication connections such that

for each respective FEC code word characters of said each respective FEC code words

word are transmitted across multiple ones of the communication, connections and such

that characters of said each respective FEC code word that are transmitted over the

same communication correction are separated by at least one character of another of

the FEC code words but bits of the same character of said each respective FEC code

word are successively transmitted over the same communication connection without

any intervening bits from other characters wherein each of the communication

connections is communicatively coupled to a remote receiving unit. Consequently, claim

1 is allowed over the prior art.

Claims **2-5 and 18,** which is/are directly or indirectly dependent/s of claim 1 are

also allowable over the prior art of record.

As per claim 6:

The prior art, Gibson et al. (U.S. PN: 6,922,806) teach or disclose a system for

fast forward error correction coding includes a transmitting device having a data source

and a forward error correction (FEC) encoder (FEC module) wherein the FEC encoder

is coupled to the data source and is adapted to encode packetized data from the data

source and a channelizer is coupled to the FEC encoder and is adapted to interleave

the FEC encoded packetized data among a plurality of communication channels. The

prior art, Matsumoto (U.S. PN: 6,522,731) teaches that a transmitter configured to

transmit scramble and forward error correction (FEC) (85, 86) and an interleaver (87)

and further this configuration corresponds to the configuration on the receiver side (see

col. 9, lines 43-52). However, the prior art taken singly or in combination fail to teach,

anticipate, suggest, or render obvious a forward error correction communication system,

comprising: a forward error correction (FEC) module configured to define a plurality of

FEC code words each of the FEC code words having a plurality of characters and each of the characters having a plurality of bits the plurality of FEC code words including a first FEC code word and a second FEC code word; and a transmission module configured to transmit the FEC code words to a remote receiving unit via a plurality of communication connections, the transmission module configured to ensure that characters of the first FEC code words word are transmitted across ' multiple ones of the communication connections and that characters of the second FEC code word are transmitted across multiple ones of the communication connections the transmission module configured to ensure that a first character from the first FEC code word is separated from a second character of the first FEC code word by at least a character of the second FEC code word when the first and second characters are transmitted over one of the communication connections, said transmission module further configured to transmit the first FEC code word such that bits of the first character are successively transmitted over the one communication connection without any intervening bits from other characters. Consequently, claim 6 is allowed over the prior art.

Claims **7-9 and 19,** which is/are directly or indirectly dependent/s of claim 6 are also allowable over the prior art of record.

As per claim 10:

The prior art, Gibson et al. (U.S. PN: 6,922,806) teach or disclose a system for fast forward error correction coding includes a transmitting device having a data source and a forward error correction (FEC) encoder (FEC module) wherein the FEC encoder is coupled to the data source and is adapted to encode packetized data from the data

source and a channelizer is coupled to the FEC encoder and is adapted to interleave

the FEC encoded packetized data among a plurality of communication channels. The

prior art, Matsumoto (U.S. PN: 6,522,731) teaches that a transmitter configured to

transmit scramble and forward error correction (FEC) (85, 86) and an interleaver (87)

and further this configuration corresponds to the configuration on the receiver side (see

col. 9, lines 43-52). However, the prior art taken singly or in combination fail to teach,

anticipate, suggest, or render obvious a forward error correction communication system

comprising: memory for storing a plurality of forward error correction (FEC) code words

each of the FEC code words having a plurality of characters and each of the characters

having a plurality of bits; and means for transmitting the FEC code words to a receiving

unit via a plurality of communication connections that are communicatively coupled to

the receiving unit, the transmitting means configured to ensure that for each respective

FEC code word characters of said each respective FEC code words word are

transmitted across multiple ones of the communication connections, the transmitting

means configured to ensure that characters of said each respective FEC code word that

are transmitted alone the same communication connection are interleaved with

characters from at least one other FEC code word the transmitting means further

configured to ensure that for each respective character of the FEC code words bits of

said each respective character are not separated by bits of other characters when

transmitted across the communication connections. Consequently, claim 10 is allowed

over the prior art.

As per claim 11:

The prior art, Gibson et al. (U.S. PN: 6,922,806) teach or disclose a system for

fast forward error correction coding includes a transmitting device having a data source

and a forward error correction (FEC) encoder (FEC module) wherein the FEC encoder

is coupled to the data source and is adapted to encode packetized data from the data

source and a channelizer is coupled to the FEC encoder and is adapted to interleave

the FEC encoded packetized data among a plurality of communication channels. The

prior art, Matsumoto (U.S. PN: 6,522,731) teaches that a transmitter configured to

transmit scramble and forward error correction (FEC) (85, 86) and an interleaver (87)

and further this configuration corresponds to the configuration on the receiver side (see

col. 9, lines 43-52). However, the prior art taken singly or in combination fail to teach,

anticipate, suggest, or render obvious a method for communicating forward error

correction code words, comprising the steps of: transmitting a plurality of forward error

correction (FEC) code words across a plurality of communication connections to a

remote receiving unit. each of the FEC code words having a plurality of characters and

each of the characters having a plurality of bits; and for each respective FEC code

word. ensuring that characters of said each respective FEC code word are transmitted

across ' multiple ones of the communication connections via the transmitting step and

ensuring that characters of said each respective FEC code word that are transmitted

along the same communication connections are interleaved with characters from at

least one other FEC code words wherein the transmitting step comprises the step oft for

each respective character of the FEC code words. successively transmitting bits of said

each respective character such that said bits are not separated by bits of other characters. Consequently, claim 11 is allowed over the prior art.

Claims **12-20,** which is/are directly or indirectly dependent/s of claim 11 are also allowable over the prior art of record.

As per claim 14:

The prior art, Gibson et al. (U.S. PN: 6,922,806) teach or disclose a system for fast forward error correction coding includes a transmitting device having a data source and a forward error correction (FEC) encoder (FEC module) wherein the FEC encoder is coupled to the data source and is adapted to encode packetized data from the data source and a channelizer is coupled to the FEC encoder and is adapted to interleave the FEC encoded packetized data among a plurality of communication channels. The prior art, Matsumoto (U.S. PN: 6,522,731) teaches that a transmitter configured to transmit scramble and forward error correction (FEC) (85, 86) and an interleaver (87) and further this configuration corresponds to the configuration on the receiver side (see col. 9, lines 43-52). However, the prior art taken singly or in combination fail to teach, anticipate, suggest, or render obvious a method for communicating forward error correction code words, comprising the steps of defining a plurality of forward error correction (FEC) code words each of the FEC code words having a plurality of characters and each of the characters having a plurality of bits the plurality of FEC code words including a first FEC code word and a second FEC code word; and interleaving the plurality of FEC code words across a plurality of communication connections such that characters of the first code words word are transmitted across multiple ones of the

communication connections and such that characters of the first FEC code word are separated by characters from the second FEC code word but bits of each respective character of the first FEC code word are not separated by bits of other characters. Consequently, claim 11 is allowed over the prior art.

Claims **15-17,** which is/are directly or indirectly dependent/s of claim 14 are also allowable over the prior art of record.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Conclusion

2.   Any inquiry concerning this communication or earlier communication from the examiner should be directed to Esaw Abraham whose telephone number is (571) 272-3812. The examiner can normally be reached on M-F 8-5.

If attempts to reach the examiner by telephone are successful, the examiner's supervisor, Albert DeCady can be reached on (571) 272-3819. The fax phone numbers for the organization where this application or proceeding is assigned (571) 273-8300.

Information regarding the status of an Application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or PUBLIC PAIR. Status information for unpublished applications is available through Private Pair only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have

questions on access to the Private PAIR system, contact the Electronic Business

Center (EBC) at 866-217-9197 (toll-free).

Esaw Abraham

Art unit: 2133

GUY LAMARRE
PRIMARY EXAMINER